Work Orde Wednesday, May											Page !
Item ID: Revision ID:	D3199-1			Accept					Setup S	Start	
Item Name:	Bracket								S	Stop	
Start Date: Required Date: Reference:	5/18/2011 5/23/2011	Start Qty: 30.00 Req'd Qty: 30.00	1100100		Cust Item I Customer:	D:					
Approvals:	Process Pla	n:	Date:	Tooling: SPC (Y/N):		ite:		1		~ .	
Sequence ID/ Work Center II	)	Operation Description		Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Rejec Qty	t Reject Number	Insp. Stamp
Draw Nbr	Rev	ision Nbr					-				
D3199	D										
		FLOW WATER JET		0.00				י כלו	-1 (	14-78 - 14-7	
Waterjet FLOW CNC Waterjo	et	Memo Cut as per I Dwg Rev:_ Prog Rev:_	$\frac{\overline{Q}}{Q}$	0.00				<u> </u>	- <u>6-</u> (_	30	
		Deburr if re	equired								

0.00

0.00

1311-6-1

110 QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

Dart Aerospace	Ltd
----------------	-----

W/O:			W	ORK ORDER C	ANGES					
DATE S	STEP	PRO	CEDURE CH	ANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No:		PAR #:	Fault Cat	tegory:	N	CR: Yes	No <b>DQ</b>	A:	Date: _	
	Re	esolution:	Dispositi	ion:	a	A: N/C CI	osed:		Date: _	
NCR:		V	VORK ORI	DER NON-CONFO	RMANC	E (NCR	)		·	
DATE	STEP	Description of NC		Corrective Action	Section B		Verific	cation	Approval	Approval
DAIL	JILI	Section A	Initial Chief Eng	Action Descri Chief Eng	ption	Sign & Date	Secti	ion C	Chief Eng	QC Inspector
: ]										
				,						
1 1			[ [		I.	i				1

W	ork	Or	ler	ID	69	757
77	VIII	$\mathbf{v}$		11/	v	, ,

Wednesday, May 18, 2011 1:00:40 PM



Page 2

Item ID:

D3199-1

Accept



Setup Start

Stop

Stop



**Revision ID:** 

Item Name:

Bracket

**Start Date:** 5/18/2011 Required Date: 5/23/2011 **Start Qty: 30.00** 

Req'd Qty: 30.00

**Cust Item ID: Customer:** 

Reference:

**Approvals:** 

Process Plan:

Date:

Tooling:

Date:

Start Run



QC:

Date:\_\_\_\_\_

SPC (Y/N):

Date:

Tool ID

Tool # Plan Code

Accept Reject **Qty** Qty

Insp. Reject Number Stamp

Sequence ID/ **Work Center ID** 

120

Quality Control

Memo

QC8- Inspect parts - second check

Set Up/ **Run Hours** 

0.00

D'uloblos

130

Small Fab

Small Fab

Operation

Description

0.00

0.00

SB 11/06/09

Small Fab

Form as per dwg D3199 use DT9723

140

QC5- Inspect part completeness to step on W/O

0.00

& whochis

Quality Control

Memo

Memo

0.00

Dart Aerospace L	ta
------------------	----

W/O:			WO	RK ORDER C州	ANGES					
DATE	STEP	PRO	OCEDURE CHAN	IGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QG Inspector
					<u> </u>					k
· · · · · · · · · · · · · · · · · · ·										
	·									
		*								
Part No		PAR #:	Fault Categ	ory:	NO	CR: Yes	No DQ	A:	Date: _	
	R	esolution:	Disposition	:	Q,	A: N/C CI	osed:		Date: _	
NCR:			WORK ORDE	R NON-CONFO	RMANC	E (NCF	(1)			
DATE	STEP	Description of NC	<b> </b>	Corrective Action	Section B	T	Verific	cation	Approval	Approval
DAIL	SIEF	Section A	Initial Chief Eng	Action Descrip Chief Eng	tion	Sign 8 Date	Sect	on C	Chief Eng	QC Inspector
					<u>.</u>					
NOTE: D	ate & initi	al all entries				1			1	

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

#### Work Order ID 69757

Wednesday, May 18, 2011 1:00:40 PM



Page 3

Item ID:

D3199-1

Accept



Setup Start

Stop



**Revision ID:** 

Item Name:

Bracket

**Start Date:** 5/18/2011 Required Date: 5/23/2011 **Start Qty: 30.00** 

Req'd Qty: 30.00



Date: \_\_\_\_\_

**Cust Item ID:** 

**Customer:** 

Reference:

Approvals:

Process Plan:

Date:\_\_\_\_\_

**Tooling:** 

SPC (Y/N):

Tool ID

Date:

Tool # Plan

Code

Date:

Run

Accept

Qty

Start



Stop

Reject

Qty

Number Stamp

Insp.

Reject

Sequence ID/ **Work Center ID** 

150

Powdercoat

160

**Quality Control** 

Operation Description

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

Set Up/ **Run Hours** 

0.00

OVEN TEMPERATURE:

QC3- Inspect Part Finish

Memo

Identify as per dwg & Stock Location: 236

0.00

0.00

170

Packaging Packaging

Memo

0.00

0.00

## **Dart Aerospace Ltd**

W/O:			WC	RK ORDER CH	ANGES					
DATE	STEP	PRO	OCEDURE CHA	NGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
									-	
Part No	•	PAR #:	Fault Cate	gory:	N	CR: Yes	No <b>DQA</b> :		_ Date: _	
	R	esolution:	Disposition	າ:	Q	A: N/C Cld	sed:		Date: _	
NCR:		\	WORK ORDI	ER NON-CONFO	RMANC	E (NCR	)			
DATE	STEP	Description of NC		Corrective Action	Section B		Verifica	ition	Approval	Approval
DATE	SIEP	Section A	Initial Chief Eng	Action Descrip	tion	Sign & Date	Section	n C	Chief Eng	QC Inspector
							Š			
										·
									1	1

#### Work Order ID 69757

Wednesday, May 18, 2011 1:00:40 PM



Page 4

Item ID:

D3199-1

Accept

Setup Start



**Revision ID:** 

**Start Date:** 

**Item Name:** 

Required Date: 5/23/2011

Bracket

5/18/2011

**Start Qty: 30.00** 

Req'd Qty: 30.00



Date:

**Cust Item ID:** 

**Customer:** 

Reference:

Approvals:

Process Plan:

Date:

Tooling:

SPC (Y/N):

Date: Date: Run

Start

Stop

Stop

**Work Center ID** 

Sequence ID/

Operation Description

QC:

QC21- Final Inspection - Work Order Release

Set Up/

Run Hours

Tool ID

Tool # Plan Code

Reject Accept Qty Qty

Reject Number Stamp

Insp.

180

Memo

0.00

0.00

Quality Control

Dart Aerospace Ltd
--------------------

W/O:			W	ORK ORDER CH	ANGES					
DATE	STEP	PRO	CEDURE CH	IANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
		•								
Part No	:	PAR #:	Fault Ca	tegory:	NC	R: Yes	No DQ	A:	_ Date: _	
	R	esolution:	Disposit	ion:	QA	: N/C CI	osed:	· · · · · · · · · · · · · · · · · · ·	Date: _	
NCR:	,	·	VORK OR	DER NON-CONFO	RMANCI	E (NCF	R)			
DATE	STEP	Description of NC		Corrective Action	Section B		Verifi	cation	Approval	Approval
DATE	SIEF	Section A	Initial Chief Eng	Action Descrip	tion	Sign 8 Date	Sec	tion C	Chief Eng	QC Inspector
	1									
:										
					1					
					l.					

### **Picklist Print**

Wednesday, May 18, 2011 1:00:46 PM

Work Order ID: 69757

D3199-1 Parent Item:

Parent Item Name:

Bracket



Start Date: 5/18/2011

Required Date: 5/23/2011

Page 1

**Start Qty: 30.00** 

Required Qty: 30.00

Comments:

IPP Rev:C IPP Rev:D

Removed Scribing

As per Rev B

05-11-05 JLM 06-11-24 JLM

IPP Rev:E

11.03.31 as per ecn 11-531 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Primary Item Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S20GA		Purchased	No		100	sf	80.7000	0.099	3.126316			

304/316 .040 Sheet

<b>Location</b>	Loc Qty	Loc Code	
MAT020	80.7		····
116623	0.2		
117550	80.5		117

1B11-6-1

Dart Aerospace Ltd	Dail	ACI	US	pace	Lu
--------------------	------	-----	----	------	----

W/O:			W	/ORK ORDER C州	<b>ANGES</b>						
DATE	STEP	PROCEDURE CHANGE				Ву	Date (	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
									F10d Wigi		
		·									
Part No	):	PAR #:	Fault Cat	tegory:	N	ICR: Yes	No <b>DQA</b> :		Date: _		
					QA: N/C Closed: Date:						
NCR:	<del></del>	•	WORK ORI	DER NON-CONFO	RMANO	CE (NCR	1)				
DATE	CTED	Description of NC	Corrective Action		Section B		Verificat	Verification		Approval	
DATE	STEP	Section A	Initial Chief Eng	Action Descrip	otion	Sign & Date	Section		Approval Chief Eng	QC Inspector	
					-			····			

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

DART AEROSPACE LTD	Work Order:	69757
Description: Bracket	Part Number:	D3199-1
Inspection Dwg: D3199 Rev: C		Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.210	+0.005/-0.001	-215	æ		V BG2	
0.575	+/-0.010	.578	>		V	
1.090	+/-0.010	1,090	6		V	
2.015	+/-0.010	2.015	>		V	
2.971	+/-0.010	7.971	<b>&gt;</b>		V	
1.830	+/-0.010	1.836	7		V	
4.830	+/-0.010	4.827	>	1	V	
4.030	+/-0.010	4.678	×		V	
·						
		•				
			-			
		`.				

Measured by:	B	Audited by:	2	Preliminary Approval:	
Date:	11-6-1	Date:	1106(0	Date:	

Rev	Date	Change	Revised by	Approved
Α	06.10.20	New Issue	KJ/JLM	
В	06.11.24	Dwg Revision revised	KJ/JLM <sub>1</sub> Δ	,,
С	11.03.08	Dwg Rev updated	KJ of	<b>A</b>
	<u> </u>		<del></del>	

# **Dart Aerospace Ltd**

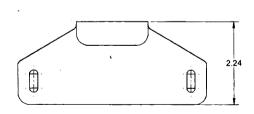
W/O:				W	ORK ORDER CHANGE	ES					
DATE	STEP	PRO	CEDURE	СН	ANGE		By Date		Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
		÷									
											,
Part No: PAR #:											
			osition: QA: N/C Closed: Date:								
NCR:		V	VORK	RE	DER NON-CONFORMA	NCE	(NCR)				
DATE	STEP	Description of NC Section A	Initia	ı	Corrective Action Section Action Description	on B	Sign &		cation ion C	Approval Chief Eng	Approval QC Inspector
		Section A	Chief Er		Chief Eng		Date	Seci	IOII C	Offiel Eng	QC Hispector
										,	
,											
							-				
			1	<b>l</b>							

NOTE: Date & initial all entries

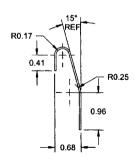
H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

1.830 R0.30 TYP BEND LINES R0.01 R0.105 2.971 GRAIN DIRECTION 4PI TYP 2.29 2.015 REF 0.575 1.00 1.090 REF 0.315 0.400 4.030

#### D3199-1F FLAT PATTERN



D3199-1 BRACKET



SHOP COPY RETURN TO ENGINEERING UNCONTROLLED CUTY SUBJECT TO AMENDMENT WITHOUT NOTICE

WITHOUT NOTICE
WORK ORDER
NO. 1925

REV.	DESCRIPTION	BY	DATE
Α	NEW ISSUE	CP	03.08.05
В	2.24 WAS 2.142; ADD FINISH; UPDATE DWG	СВ	06.11.01
С	ADD -3/-4 PART (SHEET 2-4)	HS	09.11.19
D	RE-DESIGNED D3199-31-41-3F PER CUSTOMER FEEDBACK TO ELIMINATE BINDING OF DOOR ONCE BRACKETS ARE INSTALLED. REF.: PAR11-79	MB	11.03.21

DESIGN	91	J DAKI AEKOS	PACELID		
DRAWN	4	HAWKESBURY, ON			
CHECKED	455	DRAWING NO.	REV. D		
MFG. APPR.	7	D3199	SHEET 1 OF 4		
APPROVED	10	TITLE	SCALE		
DE APPR.		BRACKET	NTS		
DATE 110	3 21	COPYRIGHT © 2003 BY DART AEROSPACE LTD THIS COCUMENT IS REVEAL AND CONFIDENTIAL AND IN SUPPLED ON THE EXPRESS CONDITION THAT IT IS			

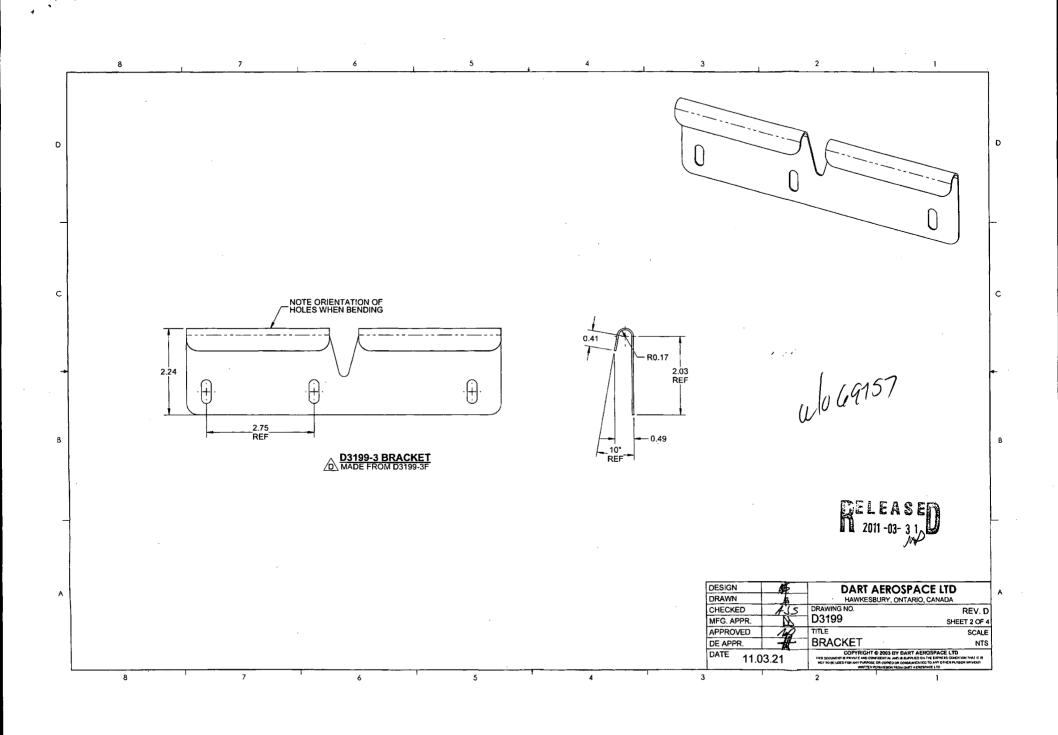
NOTES:
1) MATERIAL: AISI 304/316 SS SHEET, 0.040 THICK, ANNEALED, 2B FINISH
PER MIL-S-5059, OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF DART SPEC M304S20GA
2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
3) TOLERANCES: PER DART OSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-X" AND B/N "BXXXXX" PER QSI 044 6.1
7) WEIGHT: D3199-1 = 0.11 lbs, D3199-3/-4 = 0.26 lbs EACH

5

D

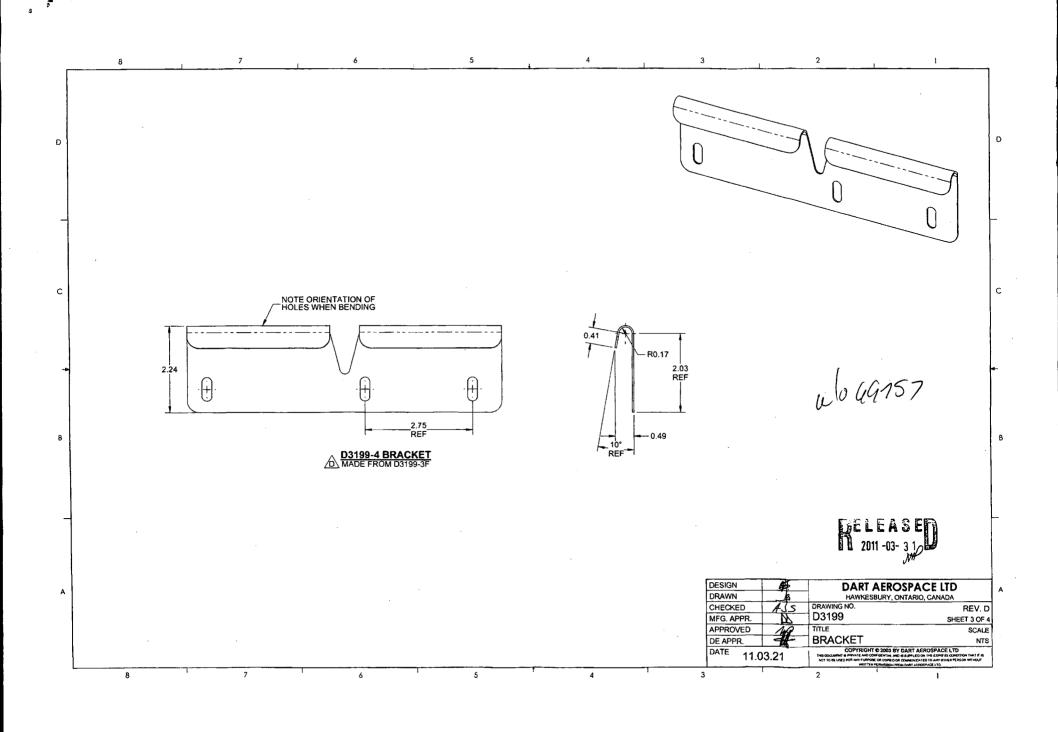
Dart Aerospace
----------------

W/O:			W	ORK ORDER CH	ANGES					
DATE	STEP	PRO	CEDURE CH	ANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
			· · · · · · · · · · · · · · · · · · ·		<del> </del>					
Part No	•	PAR #:	Fault Ca	tegory:	N	CR: Yes	No DQA	۱:	Date:	
Resolution:			Disposit	ion:	QA: N/C Closed: Date:					
NCR:		V	VORK OR	DER NON-CONFO	RMANC	E (NCR	)			
		Description of NC		Section B	Verific	erification Approva		Approval		
DATE	STEP	Section A	Initial Chief Eng	Action Descrip Chief Eng	tion	Sign & Date	Section		Chief Eng	QC Inspector
						:				i
					<b>-</b>					
										:
					1					

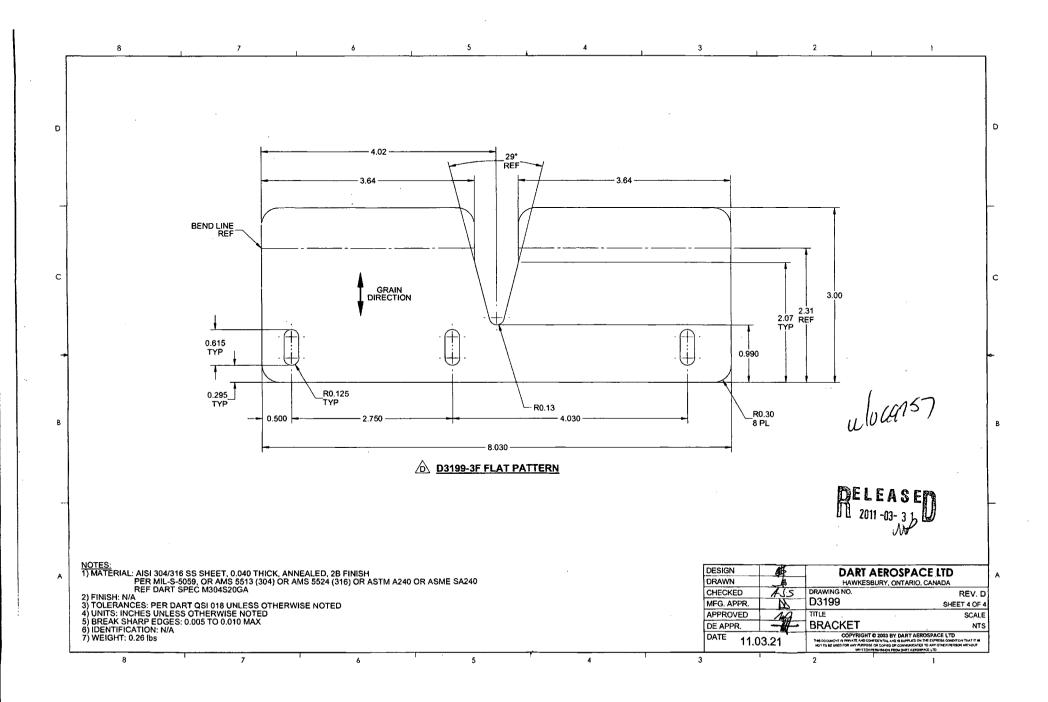


Dart Aerospa	ace Ltd
--------------	---------

W/O:			W	ORK ORDER CH	ANGES					· · · · · · · · · · · · · · · · · · ·
DATE	STEP	PRO	CEDURE CH	ANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
			-						Prod Wgr	
										i
		÷								
				ŀ						
Part No		PAR #:	Fault Cat	egory:		NCR: Yes	No <b>DQ</b>	A:	Date:	
Resolution:			Disposition: QA: N/C Closed:					Date:		
NCR:		V	ORK ORI	DER NON-CONFO	RMAN	CE (NCR	)			
		Description of NC	Corrective Action			Section B			Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Descrip	tion	Sign & Date		cation tion C	Chief Eng	QC Inspector
	,									
					l.					
									1	
II.										
	}				1					1



Dart Aer	ospace	e Ltd								٠.,	
W/O:			V	ORK ORDER CH	ANGES						
DATE	STEP	PROCEDURE CHANGE				Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
		÷									
					NCR: Yes No DQA: Date:						
Resolution:			_ Disposit	ion:	QA: N/C Closed: Date:						
NCR:		W	ORK OR	DER NON-CONFO	RMANC	E (NCR	)				
DATE	STEP	Description of NC Section A	Corrective Action Initial Action Descri		Section B  tion Sign & Date		Verific Secti		Approval Chief Eng	Approval QC Inspector	
			Chief Eng	Chief Eng		Date					



Dart	<b>Aeros</b>	pace	Ltd
------	--------------	------	-----

W/O:			WO	RK ORDER C	IANGES					
DATE STEP		PROCEDURE CHANGE				Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No:		PAR #:	Fault Cate	NCR: Yes No DQA: Date:						
Resolution:			Disposition	QA: N/C Closed: Date:						
NCR:			WORK ORDE	R NON-CONF	ORMANCE	(NCR	)			
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verific	ation	Approval	Approval
			Initial Chief Eng	Action Descr Chief Eng	iption 	Sign & Date	Section		Chief Eng	QC Inspector
								:		
		e.								9
		,								
						1				